



AUO

G150XG01 V4 - Projected Cap. Touch Promotion Kit

General Display

2011/1/18

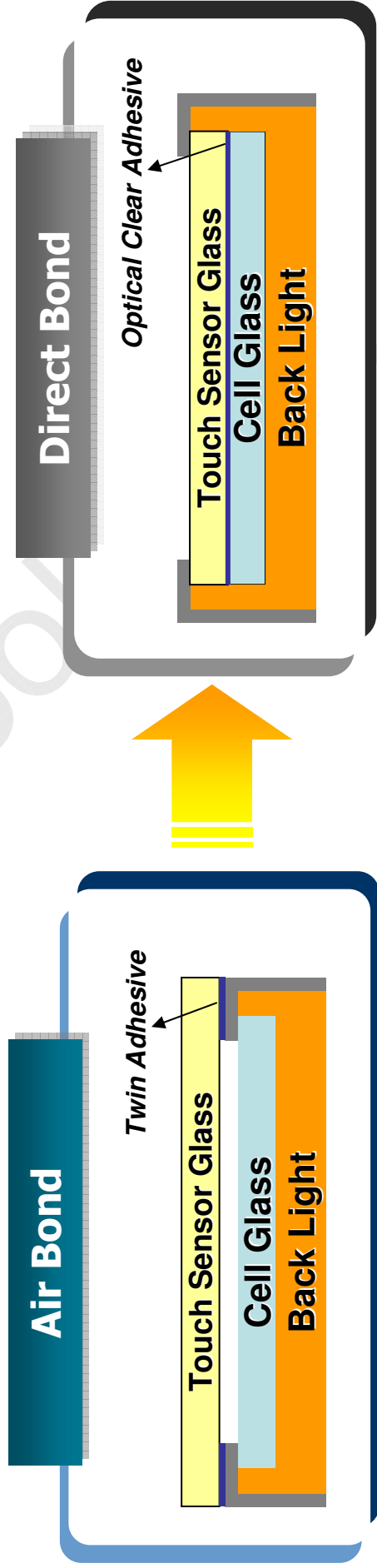
AUO In-House Touch Total Solution

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Out-cell Projected Capacitive Touch

Key Features

- Support up to 10mm sensing high with cover lens
- Support multi-touch
- Achieve accuracy 100 dpi
- Provide excellent durability as sensor inside glass



Technology Comparison

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	Resistive	Projected Capacitive	Surface Capacitive	Infrared
Transmissivity	△	○	○	◎
Touch Resolution	◎	△	◎	○
Durability	△	◎	◎	◎
Cost	◎	○	○	△
Multi-Touch?	△	◎	△	◎

◎: Excellent ○: Good △: Normal

Database: Display Search and GD Marketing

For GD Application

P-cap pros.: excellent durability, good transmittance, and multi-touch (for gaming market).

Durability



P-Cap

Cover Lens
Touch Sensor Glass
Display Panel

- **Touch sensor protected inside cover lens**
- Performance unaffected by moisture, dust

Resistive

Touch Sensor Film
Cover Lens
Display Panel

- Touch sensor on film => ITO crack concern
- No protection outside touch sensor film

Infrared

Infrared LED
Cover Lens
Display Panel

- Emitting and receiving LEDs mounted outside cover lens.
- Direct sun light affects infrared lights.

AUO P-Cap Touch Total Solution

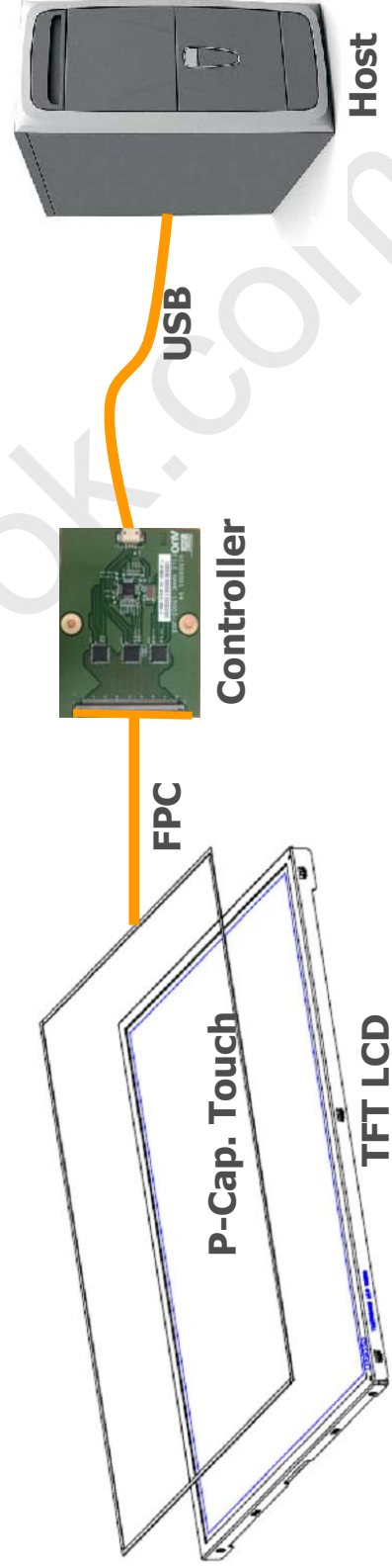
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AUO provide P-Cap Touch total solution

- AUO support any issue debug
- All vendor audits taken care by AUO
- AUO provide the best cost, capacity and quality

***Trouble Free !!***

TFT LCD + P-Cap. Touch + Controller + Driver

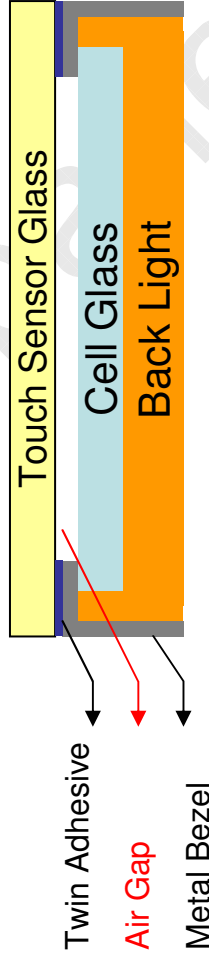


Module Structure

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AUO support two types of structure by steps.

Air Bond - Step1



Structure

T/P on **Metal Bezel**

Adhesive

Twin Adhesive

Gap

Gap b/w T/P & Cell glass

Reflection

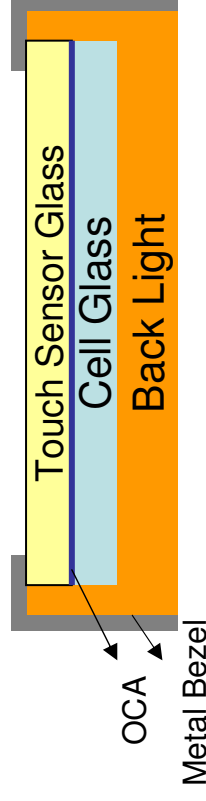
Normal

Robustness

Normal

Direct Bond

- Step2



T/P on **Cell Glass**

OCA(SVR)

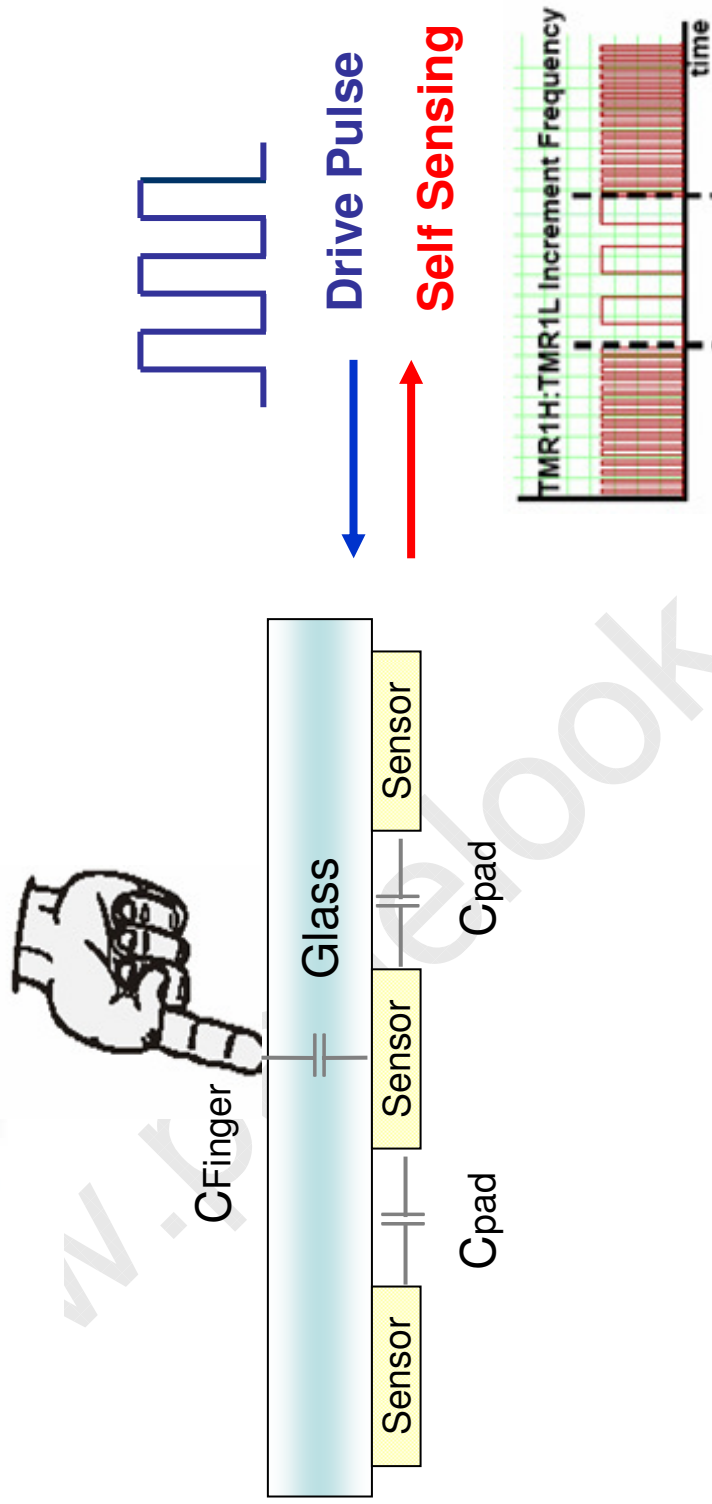
No Gap

Low

Good

Principle_Sensing

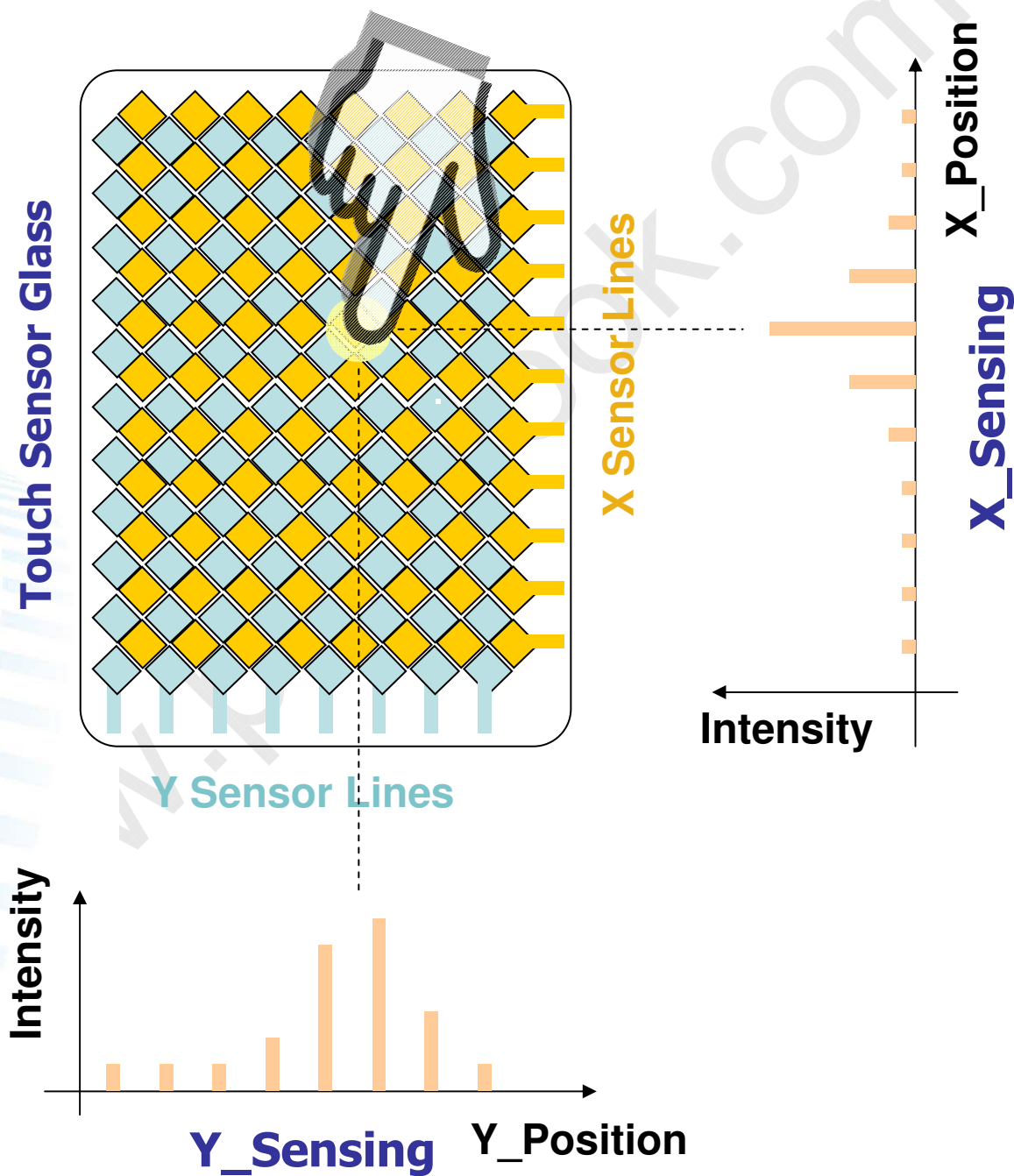
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1. C_{Finger} change the total capacitance of the sensor line.
(Support finger and gloved finger)
2. Controller IC detect the frequency change of drive pulse.
3. The touch position is confirmed.

Principle_Positioning

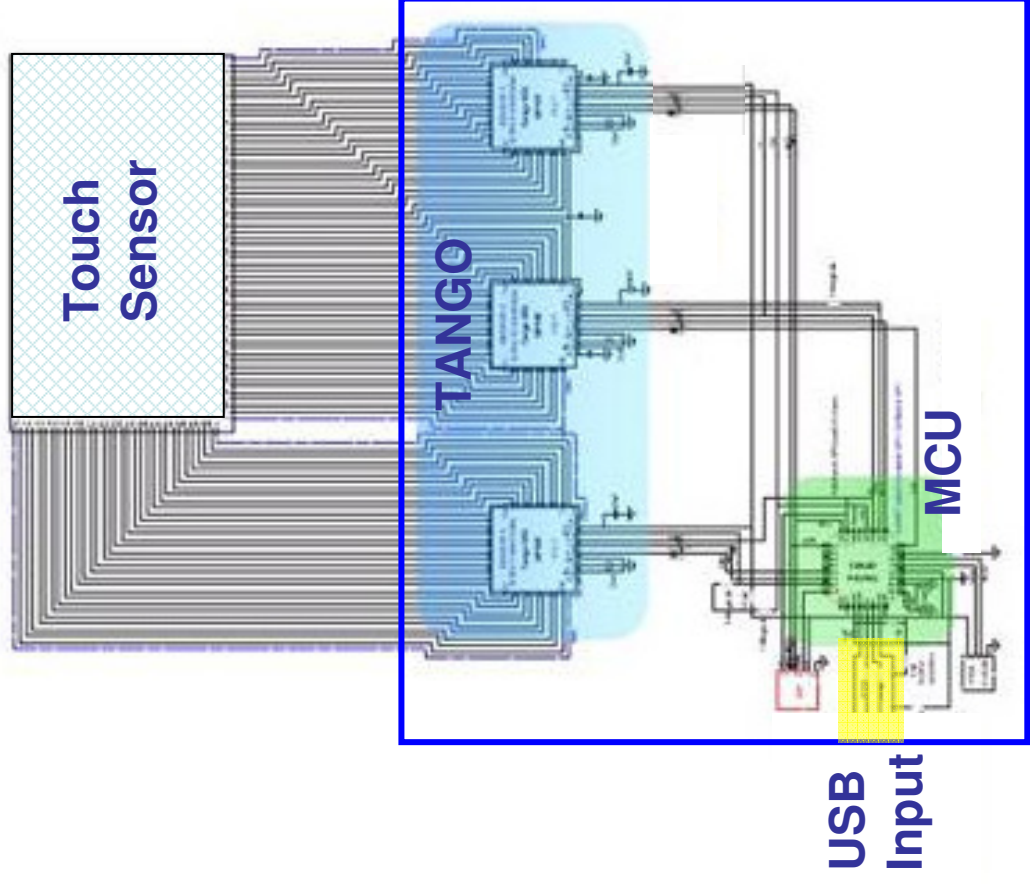
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Function Block

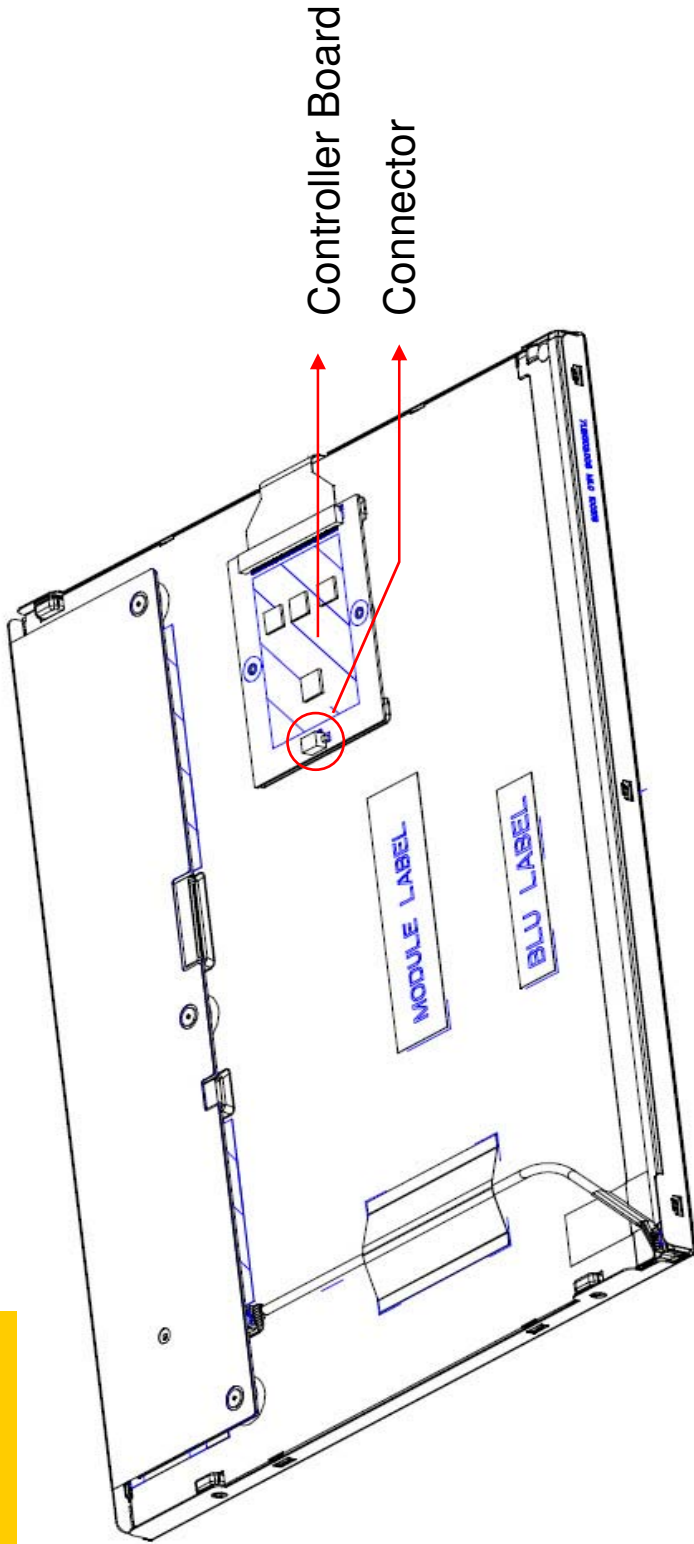
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Touch Controller IC is embedded



Interface

Connector Position



Connector Type

Manufacturer	Hirose
Type / Part Number	DF13A-4P-1.25H
Mating Connector	DF13-4S-1.25C

Pin Assignment

Pin no.	Symbol	Function
1	VOUT	USB +5V pin
2	-Data	D-USB Full Speed Negative Data Upstream Port / DATA
3	+Data	D-USB Full Speed Positive Data Upstream Port / CLOCK
4	GND	GND

Schedule

AUO**Step1-1 Step1-2 Step2**

Structure Type

Air Bond

Air Bond

Direct Bond

Cover Lens Supported*

10mm

3mm

Touch Point

One

Two

Sample Available

2011 Feb.

2011 Mar.

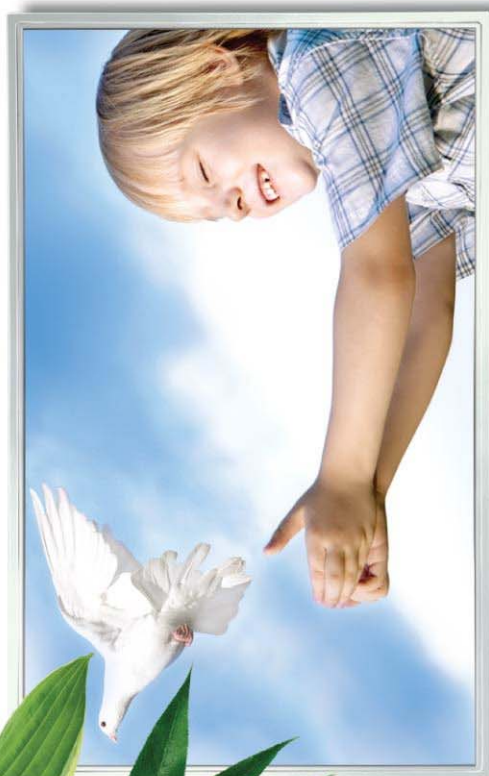
2011 Jun.

* Note: Cover Lens is not included in AUO product.

Specification

Touch Panel Specification	
Sensor	
Detection Method	Projective Capacitive Type
DPI	100
Position Accuracy	+/-1.5mm
Mechanical	
Sensor Thickness	0.7mm
Stylus Type	Finger, gloved finger
Hardness	Mohs 7
Controller	
Report Rate	60Hz
Power	110mW
Interface	USB v2.0
Driver OS supported	Win7, XP, CE, Linux
Cover Glass Supported	Up to 10mm

For **10mm** cover lens application, support **one finger** touch
For **3mm** cover lens application, support **two finger** touch



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Innovating Life